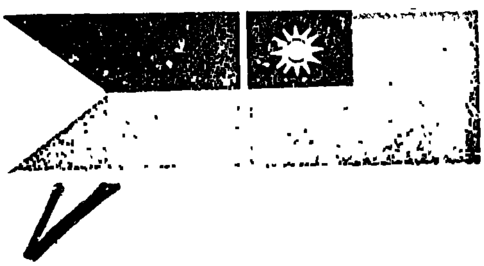
PH-AAA-033

final report

BINAHAAN-TIBAK RICE RESEARCH DEMONSTRATION AND PRODUCTION PROJECT

OCT. 23, '67 – JUNE 30, '69



CONTENTS

Foreword

1 History

3 Objectives of the Project

3 Organization and Personnel

5 Agricultural Situation of The Project Area

6 Applied Research

13 Demonstration and Education Work

17 Credit and Financial Assistance

19 Irrigation and Drainage Activities

20 Agro-Technical Assistance

23 Rice Production Cost and Income Per Hectare

26 Production and Consumption

27 Remarks

Pictorials

Tables

FOREWORD

The Binahaan-Tibak Rice Research, Demonstration and Production Project is a joint undertaking of the Governments of the Republic of China and the Republic of the Philippines. Educating the farmers on improved cultural practices by utilizing all proven tools of production and the coordinated efforts of different agencies has resulted in the increase of production per unit area and higher income for the farmers.

The report presented herein is the accomplishment of the project from October 23, 1967 to June 30, 1969.

H.T. TSAI
Chief of Chinese Mission

EMILIANO P. GIANZON
BPI Regional Director R-6
Concurrently Project Director

湯玉峰
FRED Y. TANG
Extension Specialist

HISTORY

April, 1966 - Proposal of His Excellency Ambassador Han Lih-Wu of the Republic of China to His Excellency President Ferdinand E. Marcos for a visit of His Excellency Fernando Lopez, Vice-President and concurrently Secretary of Agriculture and Natural Resources of the Philippines, to Taiwan in an informal gathering at the residence of Don Eugenio Lopez.

May 6, 1966 - Memorandum of Understanding was signed in Taipei, Taiwan, between the Honorable K.T. Li, Minister of Economic Affairs of the Republic of China, and His Excellency the Vice-President, Fernando Lopez, providing for a dispatch of a team of Chinese Specialists on rice production to the Philippines.

May 17, 1966 - Exchange of notes between the two governments.

June 6, 1966 - Organization of Philippine counterpart to Chinese Agricultural Team. Designated head of Philippine counterpart was Emiliano F. Gianzon, Regional Director, Bureau of Plant Industry, Region No. 6.

June 10, 1966- Arrival of Chinese Agricultural Team Headed by Y.K. Yang, Chief, Farmer Services, JCRR.

July 8, 1966- Presentation of survey proposal for establishment of Baliuag Rice Extension and Demonstration Project, Baliuag, Bulacan for one year.

Aug. 30, 1966- Start of operation of Baliuag Rice Extension and Demonstration Project with Mr. Felix Enrile as Project Director and Lin K.M., Chief of Chinese Rice Technical Mission to the Philippines.

Oct. 3, 1967 - Memorandum of Understanding was signed in Quezon City, Philippines, for the establishment of another Baliuag-type Project in Leyte for a duration of one year between His Excellency Vice-President Fernando Lopez and Honorable Han Lih-Wu, Ambassador Extraordinary and Plenipotentiary of the Republic of China.

Oct. 23, 1967- Start of operation of Binahaan-Tibak Rice Research Demonstration and Production Project. Organizational meeting of different agencies involved in the project. Arrival of five members of Chinese Rice Technical Mission: Cheng, Chun-Tse, Irrigation Specialist and Production Technicians: Chen, Wei-Pi, Chang, Tsai-Chyuan, Wu, Wen-Shih and Tseng, Huan-Tong.

Dec. 21, 1967 - Arrival of Hung, Yuan-Ping, Mission Chief of the Chinese Rice Technical Mission to the Philippines, replacing Mr. Lin.

Jan. 10, 1968 - Arrival of last group of Chinese Technicians to complete the Chinese Rice Technical Team of four Specialists and thirteen Technicians in the Binahaan-Tibak Rice Research, Demonstration and Production Project.

Feb. 20, 1968 - Specialist from IRRI surveyed the blast incidence

June 7, 1968 - Vice President Fernando Lopez, accompanied by Undersecretary Pascual, Director Carandang and Consul S.C. Yang, visited the project

June 30, 1968 - Visit of Ambassador Han Li-Wu to the project.

July 15, 1968 - Proposal for the extension of the project and opening of Iloilo Project

Sept. 2, 1968 - Signing of Memorandum of Agreement in Manila for the extension of the Project to June 30, 1969 and establishment of a similar project in Iloilo.

Sept. 3, 1968 - Minister K.T. Li visited the Project. Awarding of Rice Production Contest prizes by Undersec. I. Pascual, Director Carandang and Felix Enrile, Baliuag Project Director.

Nov. 1, 1968 - Start of operation of Iloilo Project. Start of transfer of some Chinese Rice Technicians to Iloilo.

Nov. 10, 1968 - Arrival of Mr. Hai-Tu Tsai, Mission Chief of the Chinese Rice Technical Mission to the Philippines, replacing Mr. Y.P. Hung.

Nov. 16, 1968 - Mr. Gianzon left for Taipei on invitation of the government of the Republic of China for two weeks observation.

Nov. 18, 1968 - Typhoon Reming.

Nov. 23, 1968 - Typhoon Senyang.

Dec. 6, 1968 - Mr. Y.P. Hung and Mr. C. Tampil left for Taiwan.

Dec. 26, 1968 - Arrival of Mr. Tang, Yu-Feng, Extension Specialist of the Chinese Rice Technical Mission to be assigned in Palo, Leyte.

June 30, 1969 - Termination of the project.

VIPs VISIT THE PROJECT

Vice Pres. Fernando Lopez with UnderSecretary Pascual and Consul Yang with project officials try their hands at harvesting. This particular field made an average production of 150 cavs./ha.

RCPCC Director Azada talks to farmers attending farmers class.

Economic Affairs Minister K.T. Li of China (3rd from right) views growing rice with Dir. Gianzon.

Dir. Fronda (right) at Blast Nursery with Asst. Project Director Tampil

ZH

OBJECTIVES OF THE PROJECT

To bring about immediate increase in production per unit area.

To spread its benefits to other places outside the project area.

Education of rice farmers through the integrated application of improved cultural practices and proper utilization of all proven tools of production.

Demonstration on how to increase rice production through proper planning in a coordinated effort of the different agencies.

ORGANIZATION AND PERSONNEL

1. Organization

The project is under the direct control and supervision of the Director of Plant Industry per Memorandum of the Chairman and Coordinator of RCPCC dated October 3, 1967.

The agencies involved are as follows:

RCPCC - - - - - - Policy making and financial support.

Chinese Rice Technical Mission - - - Technical and extension work

BPI - - - - - - Technical guidance, applied research and supervision

APC - - - - - - Farmers' organization and education, extension and promotion of cooperatives.

NIA - - - - - - Operation, maintenance, rehabilitation and improvement of irrigation and drainage facilities.

ACA - - - - - - Credit assistance and FaCoMa supervision

RCA - - - - - - Palay procurement and marketing

See Table 1, Organizational Chart

2. Personnel

During the first two seasons of operations the project personnel was composed of a Project Director as head with a staff composed of Chinese and Filipino Specialists and 13 Chinese and 13 Filipino Production Technicians assisting him.

In the latter part of the second season and with the start of operations of the Iloilo project, the "phasing out" of the Chinese counterparts started. The Chinese Mission Chief and Specialists were recalled to Taiwan and were replaced by a new team.

By the start of the 3rd season of operation only one Chinese Specialist and 5 Production Technicians were stationed in the project, with the new mission chief and specialists stationed in Iloilo commuting between and assisting in the two projects.

The personnel composition of the project is shown in Table 2.

TRAINING OF PERSONNEL

Project personnel were from time to time trained and oriented on up-to-date agricultural technical know-how, specially on the latest inovations in rice culture, both in the conference room and in the field. Regular weekly conferences were held for better organization, coordination, integrated implementation of programs by the various agencies involved in the project, to discuss and study progress of work done and technical problems met in the field.

Agricultural Situation of the Project Area

The project area involves the irrigated area served by the Binahaan and Tibak River Irrigation System under the NIA. This covers 43 barrios and sitios in the municipalities of Alangalang Palo, Pastrana, and Sta. Fe.

The pre-project survey conducted showed that only 1,353 hectares under 1,457 farm operators were being effectively served by the irrigation systems which was increased to 2,734 hectares during the project with the introduction of a rotational scheme of water distribution. The average rice production of the area was 27.5 cavans per hectare. The farm tenure is as follows:

Size of Farms (Has.)	Owner	Tenant	Total	Percent
10 hectares - up	17	1	18	1.23
5 - 9.9	18	21	39	2.67
4 - 4.9	18	31	49	3.39
3 - 3.9	34	81	115	7.89
2 - 2.9	87	227	314	21.55
1 - 1.9	164	516	680	46.67
Less than 1 hectare	76	166	242	16.6
Total	414	1043	1457	
Percent	28.42	71.58		

AREA AND NUMBER OF COOPERATORS INVOLVED PER MUNICIPALITY

Municipality	Wet (1968)		Dry (1968)		Wet (1969)	
	Area	No. of Farmer	Area	No. of Farmer Cooperator	Area	No. of Farmer Cooperator
Pastrana	231.75	167	214.6	170	233.75	205
Palo	798.54	365	751.1	395	739.10	404
Sta. Fe	966.45	503	909.48	536	901.15	549
Alangalang	737.26	422	510.92	321	676.36	462
TOTAL	2734.00	1457	2386.10	1422	2550.36	1620

APPLIED RESEARCH

From the early part of January to the late part of February, 1968 the occurrence of rice blast was observed in several ricefields. Most of the varieties are susceptible with the BPI-76-1 seriously affected. Bengawan, a seedboard variety, apparently is resistant to the races of blast found in the area. Knowing no possible immediate control measures, technical guidance was requested from the International Rice Research Institute (IRRI). Several varieties supposed to be resistant to blast were introduced from IRRI.

The varieties tested were IR 8, IR 8(68), IR 5, BPI 76-1, Dawn, CB 5, IR lines and selections from Varietal Improvement Department and crosses from Department of Plant Pathology. All of those varieties from IRRI did not show any infection of leaf blast but IR 8 and C 4-63 were slightly infected. Some IRRI selections did not give good yield.

With the climatic condition in the locality favorable to incidence of blast and with trend of higher infection, all kinds of available fungicides were tried on fields affected by leaf blast. Our observation was that spraying with Kasumin, Bla-S and Bla-SM, the growth of the leaf blast lesions was arrested although phytotoxic effect was noticed on the leaves. Encouraged by the result, a preliminary study was conducted on the efficacy of fungicides on the control of neck rot.

Remarks and Recommendations:

a. Set up varietal blast resistant test

b. Set up further study on chemical control spraying test.

c. Field spraying with Kasumin W.P. and Bla-S and Bla-SM indicate good control

d. Adjustment of planting calender

e. Variety to be planted in the locality should be changed more or less every 3 to 4 cropping season.

* Cooperative Researches is also conducted jointly with IRRI and UPCA namely the Rice Blast Nursery, Uniform Herbicide Applied Research Trial (UHART) and Insecticide X Variety Applied Research Trial (IVART).

STUDIES ON THE SCHEDULE OF SPRAYING KASUMIN FOR THE CONTROL OF BLAST

I. Variety: BPI 76-1 (Susceptible)

IR 8 (68)(Medium)

II. Replication: Three (3) times

III. Fungicide: KASUMIN WP (1 - 1000)

IV. Area per treatment: Ten (10) Sq. M.

V. Treatment:

(1) Control (No spraying)
(2) 15 days intervals up to booting
(3) 30 days intervals up to booting
(4) 3 days just before heading plus 4 or 5 days after the start of panicle emergence plus 1 week or 7 days after the start of panicle emergence.
(5) 4 days or 5 days after the start of panicle emergence plus 7 days after the start of panicle emergence plus 14 days after the start of panicle emergence.
(6) 3 days just before the start of panicle emergence plus 4 or 5 days after the start of panicle emergence plus 1 week or 7 days after the start of panicle emergence.
(7) (2) + (4)
(8) (3) + (4)
(9) (2) + (5)
(10) (3) + (5)
(11) (2) + (6)
(12) (3) + (6)

VI. Date Harvested:

a. BPI 76-1 - June 3, 1969

b. IR 8 (68) - May 19 and 20, 1969

VII. Data: See following table:

Treatment for BPI 76-1	Average (Kgm.)	Index
1	.50	100
2	.46	92
3	.50	104
4	.44	88
5	.53	106
6	.46	92
7	.56	112
8	.43	86
9	.51	102
10	.51	102
11	.55	110
12	.50	100

Treatment for IR 8(68)	Average (Kgsm.)	Index
1	.71	100
2	.76	107
3	.79	111
4	.81	114
5	.77	108
6	.81	114
7	.81	114
8	.78	111
9	.72	101
10	.81	114
11	.75	105
12	.86	121

STUDY ON THE CHEMICAL CONTROL OF SHEATH BLIGHT OF RICE USING MON E. C.

I. Variety: IR 8

II. Area: per plot 10 sq.m. 4 Replication

III. Fungicides: Mon E. C.

IV. Concentration:

1. 0.5 liters of Mon E.C. to 2,000 liters H_2O
2. 1.0 liters of Mon E.C. to 2,000 liters H_2O
3. 1.5 liters of Mon E.C. to 2,000 liters H_2O

V. Treatment:

1. Control
2. One spraying time with 0.5 liters/2,000 liters H_2O/Ha. or 0.5/2 liters/10 sq.m.
3. One spraying time with 1.0 liter/2,000 liters H_2O/Hectare pr 1.0 cc/2 liters H_2O/10 sq.m.
4. One spraying time with 1.5 liter/2,000 liters H_2O/Ha. or 1.5 cc/2,000 cc H_2O/Ha. or 1.5 cc/2.0 liters/10 sq.m.
5. Two spraying with 0.5 liter Mon E.C./2,000 liters H_2O/Hectare or 0.5 cc./2 liters/10 sq.m.
6. Two spraying time with 1.0 liter of Mon E. C. or 1 cc./2,000 cc. H_2O/Hectare or 1.0 cc./2 liters H_2O/10 sq.m.
7. Two spraying with 1.5 liters Mon E. C. per 2,000 liters H_2O or 1.5 cc./2 liters/10 sq.m.

STUDY ON THE CHEMICAL CONTROL OF SHEATH BLIGHT OF RICE USING MON E. C.

Grain Yield - Kgm/10 sq.m.

Treatment	I	II	III	IV	Average	Index
1	.52	.45	.40	.38	.43	100
2	.51	.49	.41	.52	.48	111
3	.60	.45	.41	.45	.47	109
4	.66	.67	.59	.61	.63	146
5	.62	.62	.47	.58	.57	133
6	.53	.58	.51	.48	.52	118
7	.55	.60	.47	.55	.54	125

DIRECT SEEDING VS. TRANSPLANTING

1. Treatment and Design:

   a. Variety - IR 8(68)

   b. Fertilizer - 62-16-16

2. Cultural Practices:

   Follow the improved cultural practices:

   a. Use Dapog seedbed for raising seedlings for transplanted plot.

   b. Spacing - 25 x 25 cms. with 4 to 5 seedlings per hill.

   c. Age of seedling for transplanted plot will be 12 days old.

   d. Schedule of fertilizer application:

Time of Application	14-14-14	21-0-0
Basic application	11.4 kgm.	7.14
1st top dress	-	8.85
2nd top dress	-	5.90

Treatment	Dapdap	Sn. Juan	Anahaway	Average
Direct Seeding	6.8	8.46	8.19	7.81
Transplanted	7.8	6.15	7.25	7.06

Demonstration and Extension Work

To get across to the farmers new farming ideas, create more interest and stimulate enthusiasm for better understanding of new ideas propagated; to enable the farmers to compare the results of these new ideas with their own practices; to evaluate the actual practice of skills taught; the following were undertaken:

1. Informational and Educational Drive -

   1. Dissemination of information materials, phamplets, posters, showing of slides, conducting radio programs and exhibits.

2. Farmer Study Groups -

   A total of 25 study froups with at least 20 farmers per group were organized. Each group met monthly with well-planned activities. Wives of farmers were encouraged to join these study groups.

3. Field Tours -

   To enable the farmer to observe and compare his practices with that of his neighbor's, field tours were conducted. Tere were five tours conducted during the first season involving 946 farmers, 2 during the second season involving 450 farmers and 3 during the 3rd season involving 100 farmers.

4. Farm and Home Visit -

   Regular farm and home visits were undertaken by the Technicians and staff. Filipino Technicians were made to live in their respective assigned barrios.

5. Rice Production Contest -

To further arouse the interest of the farmers and as additional incentive for them to increase their production per unit area, rice production contest were held each season. For the first season a total of 75 contestants were registered, 30 during the second season and 31 during the 3rd season. See table 5 for the list of winners.

6. Demonstration -

Demonstrations were conducted in strategic areas in the project during the three crop seasons to educate the farmers on the following:

a. Spacing - to find out what spacing will give the highest yield per unit area.

b. Weed Control - to determine the effect of the various system of weed control using mechanical weeders and herbicides.

c. Variety Performance Fertilization - to find out which level of fertilization gives the highest yield for certain varieties using different varieties recommended in the project area.

d. Rice Stem Borer Control - to determine which of the systemic and foliar spray insecticide is more effective in the control of rice stem borer.

e. Split Fertilizer - to find out which interval in fertilization is most effective.

f. Variety Performance - to find out which variety will give the highest yield under local conditions.

g. Rate of Fertilization - to find out the rate of fertilization which will give the highest yield per unit area.

h. Direct Seeding vs Transplanting - to determine their advantages and disadvantages and which of the two will give the highest yield.

7. Tinabangay Nga Pag-Uma -

This is "Phase Three" of the project's extension program. A new extension approach designed for small-tract rice farmers, it consolidates the Farming units of "Influenced" farmers (those who have already accepted the modern method of rice culture and have increased their production) and the "Conservative" farmers (those who have partially accepted or who have not accepted at all the modern method of rice culture and have not increased their production) into one farming unit bringing up the Conservative to the level of the influenced farmers thus increasing the production of the former. This new approach solves the problems and minimizes the disadvantages commnly met in small-tract rice farming

At present there are 24 of such groups organized involving 160 farmers and covering 241.8 hectares which will be the nucleus of bigger groups envisioned to involve all the small-tract rice farmers in the entire project area in the future.

Other Activities -

a. Extension work was not confined to farmers in the project alone. Technical assistance, field tours, farmers classes and other related services were extended to farmers outside the project area.

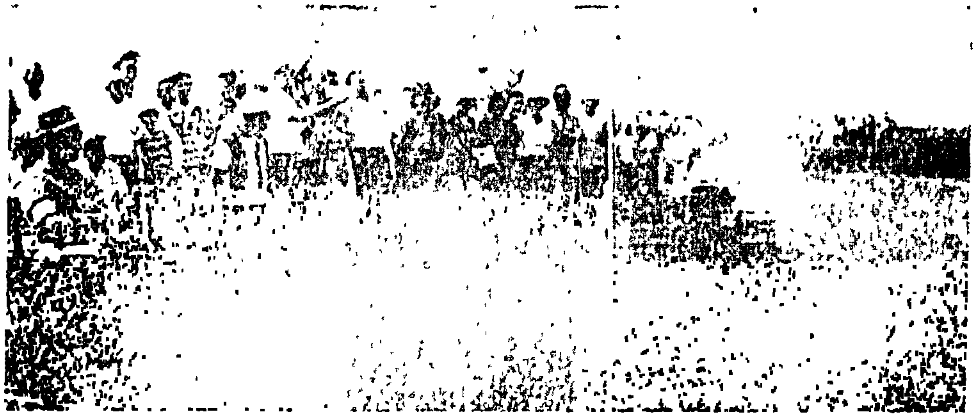
By the end of May 1969 we were able to assist 56 individual farmers in 15 municipalities outside the project area who requested technical assistance from our Specialists and Production Technicians.

b. A Farm Mechanization Demonstration was conducted by the project for farmers within and outside the project area in cooperation with the different dealers in farm machineries and equipment. The same was also attended by public schools Food Production Coordinators, officials of the Development Bank of the Philippines, representatives of the different government agencies involved in the Food Production Program and other observers. This demonstration was aimed at giving the farmers first hand knowledge on the advantages of farm mechanization, the type of machinery suited to their farm and the different means open to them for the acquisition of farm machineries and equipment.

c. A Farm Leaders Training Course was conducted by the project involving 61 selected farmers coming from the different barrios and sitios within the project area with the end in view of leaving trained leaders in the area who will take over some of the functions of the Production Technicians in their respective localities, act as the link between the Municipal Agriculturist and the farmers, and compose the membership of the Barrio Loan Committees who will process and screen loan applications and recommend and assist farmers in securing ACA loans in anticipation of the pull out of the Production Technicians in the area at the end of the project.

NEW EXTENSION AND EDUCATION APPROACH

Graduates of the Farm Leaders Training Course with Production Technicians and Resource Persons



A Farm Mechanization Demonstration For Farmers

(3) (2) (1)

Tinabangay Nga Pag-uma (Joint Farming Operations): (1) Common Seedbed (2) Weedi the cooperative way (3) Dapog seedlings being carted to rice field

CREDIT AND FINANCIAL ASSISTANCE

To help the farmers carry out farm operations following the recommended improved cultural practices, the following production loans and materials were made available to them through the ACA:

Items	Pre-Project 1966-1967	Project: Wet Season 1968	Project: Dry Season 1968	Project: Wet Season 1969
1. Production Loans				
No. of farmers served	4	378	229	167
Area served (Ha.)	7	909.55	614.3	413.9
Loan released (Pesos)	1,388.00	220,409.00	133,230.00	113,739.50
2. Production Materials				
Seeds (Cavans)	-	210	33	19
Fertilizer (Bags):				
12-12-12	52	2,655	1,131	-
14-14-14	-	-	167	612
21-0-0	93	5,684	1,410	1,169
Chemicals (Bags)	6	2,184	645	549
Sprayers (No.)	-	111	25	1
Rotary Weeder (No.)	-	207	15	4
3. Palo FaCoMa				
Number of members	88	295	420	544
Fresh Capital Paid-Up	₱5,261.00	₱10,070.00	₱23,572.74	₱27,605.54
Palay deposit (cavans)	-	9,061	9,256	
Rice Mill (Palay milled, cavans)	-	3,807	4,950	
Palay driers (set)	-	1	1	
4. Repayment *				
Full Payment (No.)		102	55	
Full Payment (Amount)		53,614.40	27,879.00	
Partial Payment (No.)		132	59	
Partial Payment (Amount)		25,306.74	12,066.77	
Interest (No.)		116	44	
Interest (Amount)		2,503.86	745.34	
Total (No.)		350	158	
Total (Amount)		81,425.00	40,691.11	

* An intensive loan collection is going on this season for loans released during the three seasons. Figures as of this report are: 1967-68 - ₱90,417.30; 1968 - ₱58,091.32; 1969 - ₱33,434.18. A good repayment is expected of past and present season loans at the end of the harvest period.

As the figures will show under item "Repayment" above, there was a low percentage of repayment in terms of pesos in the first and second seasons. But worthwhile noting is the total number of loan borrowers who made payments, either fully, partially or just the interest on their loan. From this figure it is evident that the cooperative idea or scheme has been understood and accepted by the FaCoMa members. Certain reasons and circumstance beyond their control forced them however to pay only partially or just the interest on their loans. Among the reasons were:

Force Majeure - crops were destroyed by the blast incidence during the first season or by the two typhoons during the second season;

Sickness - incurred heavy hospitalization expenses

Others - bought much needed fram work animals, machineries and equipment, some had to use money intended for repayment to capitalize their succeeding farm operations -instead of paying in full and borrowing again - because loans could not be released on time for the preplanting farm operations, some could not pay fully because their landlords refused to share in the farm operation expenses.

They promised to pay this season (3rd season) and were made to execute promisory notes. A good repayment is expected at the end of the harvesting period.

IRRIGATION AND DRAINAGE ACTIVITIES

The result of efforts made by the Production Technicians and NIA Irrigation Personnel thru proper water management and construction and improvement of irrigation and drainage systems are shown below:

	Wet Season Oct.67-June'68	Dry Season June-Nov.1968	Wet Season Nov.68-June 1969
Rehabilitation and maintenance of the Canal System -			
a. Clearing (Km.)	54.063	144.17	224.06
b. Desilting & repair of canal	26.875	211.19	212.33
Surveying, Designing and construction work:			
a. Surveying -			
Farm Ditches (Kms.)	110.79		
Drainage Canals (Km.)	4.73		
b. Designing Work -			
Farm Ditches (km.)	92.89		
Drainage Canals (km)	-		
c. Construction Work -			
Farm Ditches (km)	5.42		
Drainage Canals (km)	-	29.90	29.90
Access Roads	-	10.55	10.55

Irrigation Operation and Management

Irrigation Sys.	Wet Season		Dry Season		Wet Season
	Pre-Project 1967	Project 1968	Pre-Project 1967	Project 1968	Project 1969
Binahaan North Main Canal	765	1,434	746	1,257.52	1,379.81
Tibak	588	1,300	344	1,106.05	1,119.85
Binahaan South Main Canal	-	-	-	22.53	50.7 *
Total	1,353	2,734	1,090	2,386.10	2,550.36
Increase of Irrigated Area		1,381		1,296.10	1,197.36

* Area served by the project, but actual irrigated land area planted this season is 813 hectares.

Insufficiency of water supply during the dry months is a problem that has plagued the system since the beginning. To solve this it is highly recommended that pumps be installed at strategic places to supplement the supply of water especially during drought.

AGRO-TECHNICAL ASSISTANCE

Shown below is the project's performance record for the three seasons of its operation. It shows the progress made in the different agro-technical aspects of rice production introduced in the area.

PERORMANCE RECORD

Item	Crop Season Oct.67-June'68	Crop Season June-Nov. 68	Crop Season Jan.-June'69
Area Planted (Hectares)	2,734.0	2,386.10	2,550.36
1. IR 8	[illegible],677.	1,685.69	1,756.55
2. IR 8(68)	15.7	31.55	38.0
3. IR 5	1.8	95.20	258.90
4. IR 532	[illegible]	-	2.90
5. C 4	2.08	22.75	53.0
6. C 18	0.5	0.3	2.8
7. BPI 76-1	477.9	90.95	24.6
8. Seedboard varieties	897.4	331.05	317.14
9. Others	691.62	128.61	96.47
Seedbedding -			
a. Dapog (No. of Farmers)	60	215	172
b. Improved Wet (No. of Farmers)	1,285	1,175	1,213
Dike Improvement (No.)	1,232	1,184	1,279
Good Land Preparation (Has.)	1,855	2,174.48	2,354.24
Straight Planting (Has.)	1,232	1,822.32	1,869.65
Weeding -			
a. Rotary/hand (No.)	628	782	1,280
b. Chemical (No.)	243	601	106
Area Fertilized (Has.)	910	1,161.15	1,236.1
Pests and Disease Control -			
(Number of farmers)	730	932	1,022

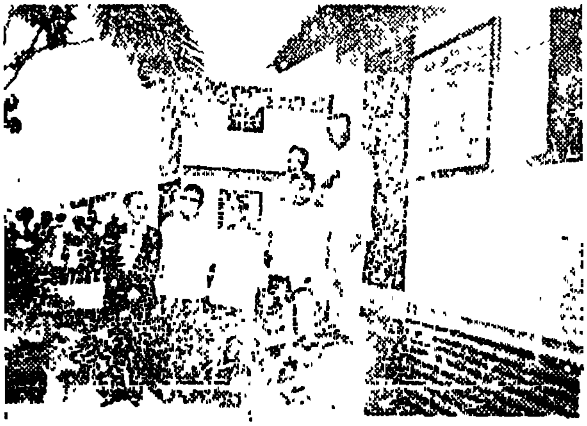
Production -

The average yield in the area increased from 27.5 to 51.69 cavans per hectare in the first season and to 69.24 cavans per hectare at the end of the project. Total production at the end of the project is 166,361.99 cavans. Area planted to different varieties and its production output is shown in table 3.

Average Gross Income -

Increased productivity also resulted in the increase of the gross income per farmer. See table 4. It will be seen from this table that while the gross income per farmer for one year (two seasons) before the project was ₱1,271.27, the gross income per farmer during the project's first year of operation was ₱2,958.60 and ₱1,798.50 during the last season. The increase in production and benefit cost ratio per season will also be seen in this table.

THE GOOD THINGS THAT CAME FROM INCREASED PRODUCTION TO FARMERS IN THE PROJECT AREA



A house and lot for this farmer
(2nd from right, front)

From this

To this

Farmer showing off newly
acquired motorcycle to project
Extension Specialist B. Ocañada

VEGETABLE GARDEN PROGRAM

In support of the Home Garden Program launched by the First Lady, Mrs. Imelda R. Marcos, Production Technicians maintained Demonstration Vegetable Gardens in their respective official stations. These demonstration gardens which had an aggregate area of 5,687 sq.m. at the same time produced vegetable seeds which were distributed to farmers within the project area. Among the vegetables raised in the demonstration gardens were: Upland kangkong, Sweet Melon, Chinese Pechay, Leaf Cabbage, Pintong Eggplant, Radish, Manary Tomato, Bitter Melon, Yutshi, Sweet Pepper, Silk Melon, and Green Pumpkin (Giant Kondol).

As a result of the campaign of Production Technicians farmers in the area with backyard spaces cultivated vegetable gardens under the former's guidance. Total area planted to Bush Beans, Eggplant, Onion, Pechay, Gabi, Okra, Tomato, Sweet Pepper, and Cabbage was 42,005 sq.m. Aside from that planted to 1,997 hills of squash, watermelon, ampalaya, cucumber, patola and upo.

RICE PRODUCTION COST AND INCOME PER HECTARE

Comparison of Improved and Ordinary Cultural Practices - - - Case 1

Item	Ordinary Method (Local Variety)	Improved Method (IR 8)
A. Cost of Labor:		
1. Preparation & care of seedbed	₱ 6.20	₱ 8.70
2. Land Preparation	48.80	96.50
3. Pulling of seedlings	9.80	10.50
4. Transplanting	25.40	51.20
5. Care of Crops:		
a. Irrigation & Drainage	4.70	8.10
b. Fertilization	-	4.10
c. Pests & disease control	.70	5.10
6. Weeding & roguing	4.20	35.80
7. Harvesting & threshing	88.50	448.10
8. Drying & hauling	7.20	29.50
SUB TOTAL	194.80	697.60
B. Cost of Production Materials:		
9. Seeds	15.00	25.00
10. Fertilizer	2.30	68.30
11. Insecticides	7.70	56.90
12. Irrigation Fee	25.00	25.00
SUB TOTAL	50.90	175.20
C. Other Costs:		
13. Dike Improvement	8.00	9.90
14. Depreciation for weeder and sprayer	-	14.30
15. Land Tax	3.00	3.00
SUB TOTAL	11.00	27.20
GRAND TOTAL	₱256.70	₱920.00
D. Production per Hectare (Cavans)	35	138
E. Gross Income per Hectare (₱16.00 per cavan)	560.00	2,208.00
F. Net Income per Hectare	303.30	1,288.00

Data based on 13 districts of the Project area.

Improved Cultural Practices with Tinabangay Nga Pag-Uma (Joint Farming Operation) - - - Case II

Items	Average Cost	
A. Cost of Labor:		
1. Preparation & Care of seedbed	₱ 5.15	
2. Land Preparation	80.96	
3. Pulling of Seedlings	6.45	
4. Transplanting	39.23	
5. Care of Crops:		
a. Irrigation and drainage	10.10	
b. Fertilization	3.72	
c. Pests and Disease Control	4.45	
6. Weeding and roguing	45.03	
7. Harvesting and Threshing	337.00	
8. Drying and Hauling	9.87	
SUB TOTAL		₱541.96
B. Cost of Production Materials:		
9. Seeds	22.54	
10. Fertilizer	67.74	
11. Insecticides	39.34	
12. Irrigation Fee	25.00	
SUB TOTAL		₱154.62
C. Other Costs:		
13. Dike Improvement	14.00	
14. Depreciation for weeder and sprayer	14.30	
15. Land Tax	6.00	
SUB TOTAL		₱ 34.30
GRAND TOTAL		₱730.88
D. Production per Hectare (Cavans)	144.60	
E. Gross Income per Hectare (P16.00 per cavan)	2,313.60	
F. Ne Income per Hectare	1,582.72	

Data based on 13 districts of the Project area during its third season operations.

The efforts of the project to attain its objective of increased production has been carried out vigorously and successfully. However, the project did not stop at this point. It further endeavored to increase the farmers' net income by assisting them to decrease their cost of production. If farming is operated as a business, the factor which is of paramount importance is its net returns. Case I shows that the cost of production on improved method during the first season of the project was ₱920.00 per hectare and with the net return of ₱1,288.00 per hectare. While Case II shows that the cost of produotion per hectare was significantly decreased to ₱730.88 and at the same time increasing the net income to ₱1,582.72 per hectare. This is due to the introduction of "Tinabangay Nga Pag-Uma" (Joint Farming Operation). A Closer study of the two cases will show that there has been a considerable decrease of expenses in almost all items due to proper application of farm management, better technology and cooperative work. Take as an example, the items "pulling of seedlings" and "harvesting" and "threshing". With many farmers adopting the Dapog system of seedbedding, the expenses of pulling the seedlings is almost entirely eliminated. In the method of Harvesting and Threshing, the farmers have attained a significant stride. They are now using the more efficient harvesting scythe compared to their traditional harvesting knife (yatab or kayog). Because of this, the harvestors are now willing to get a share of 1/6 of the harvested palay as compared to 1/5 before the project. Even with this system, the harvester can bring home more share than with the inefficient harvesting knife.

PRODUCTION AND CONSUMPTION

81,983 - Population of the four municipalities

289,400 - Yearly rice requirements in cavans based on a yearly per capita consumption of 3.53 cavans (NSDB)

PRE - PROJECT

115,765.24 - Yearly production from irrigable areas
90,700.00 - Yearly production from rainfed areas
206,465.24 - Total production

POST - PROJECT

141,327.28 - First season rice production in cavans (irrigated areas)
125,344.29 - Second season rice production in cavans (irrigated areas)
90,700.00 - Production from rainfed areas

357,371.57 - Total Production

67,971.57 - Surplus in cavans

REMARKS

In June 1969, the Binahaan-Tibak Rice Research, Demonstration and Production Project will terminate. This means that its staff and Production Technicians, both the Chinese and the Filipinos, will be pulled out from the different barrios of the four municipalities covered by the project. The withdrawal of the Production Technicians would also mean that the farmers will be left alone and be deprived of the technical guidance that the Production Technicians are presently extending. It is a fact that as a result of the efforts of the personnel of the Binahaan-Tibak Rice Project and through the productive cooperation of the farmers involved, production per unit area has doubled. It should be noted that during the first season of the project, the gross income per farmer-operator exceeded the one year gross income per farm operator before the project. The one year gross income before the project was P1,271.27 as compared to P1,798.50 as of the last season during the project. This is a clear indication that if proper guidance and assistance, both technical and financial, are given to farmers increase in production could be attained.

These questions may be asked. What will happen if the technical assistance presently given in a comprehensive procedure is pulled out? Will the farmers continue to adopt the improved cultural practices? Experience in other similar development projects undetaken previously teaches us that quite a big percentage of farmers return to their traditional practices after the technical assistance was stopped. Among the important reasons advanced was that the technical knowledge of the farmers was still very inadequate. The farmers adopted the recommended practices only because of the presence of the Production Technicians that assured them of technical advice.

This situation also applies to the project. Although there is now a considerable number of farmers adopting the recommended practices in rice culture, it is not an assurance that they have already mastered the improved farm operations. Besides, there are still several important problems in the project area to consider and which deserve serious attention:

1. Cooperative apirit among farmers is not commendable.
2. Recommended farm operations are not completely followed.
3. Educational level of farmers is very low so that it will take several cropping seasons for these farmers to really learn the recommended practices.
4. Farmers do not consider farming as a business.
5. Farmers are still dependent on the Production Technicians for technical guidance.

Furthermore there is a need for trained farm leaders in the area to take over some of the functions of the Production Technicians in their respective localities or serve as a link between the farmers and the various government agricultural agencies for a faster and steady flow of technical information once the production technicians presently working in the project are pulled out. Farm leaders are in the process of training now.

There is a need to increase, expand and strengthen Joint Farming Operation Groups (Tinabangay Nga Pag-Uma), a new concept or approach towards increased production designed for small tract rice farmers, which has just been started as "Phase Three" of the Project's extension program.

There is a need to continue the training and education of farmsers on water management and to strengthen Irrigators Associations. Only through these will the present problems of and controversies between farmers on water distribution be solved without the need for close supervision by NIA personnel.

There is a need to continue the extension of credit and financial assistance from the ACA through the FaCoMs, to the farmers in the area fro the following reasons:

a. To completely free the farmers from usurious money lenders to whom they resorted before the project for capital in their farm operations and to whom many of them are still indebted.

b. To enable a great number of those farmers who were adversely affected by the blast incidence during the first season and the two typhoons this season which destroyed their crops to recover their losses.

Extension work is a kind of out-of-school education program. Its implementation is through distribution and dissemination of new knowledge, skill and technical know-how. The objectives of our program is aimed at increasing agricultural yield, at increasing farm income and then at improving farm family living standard.

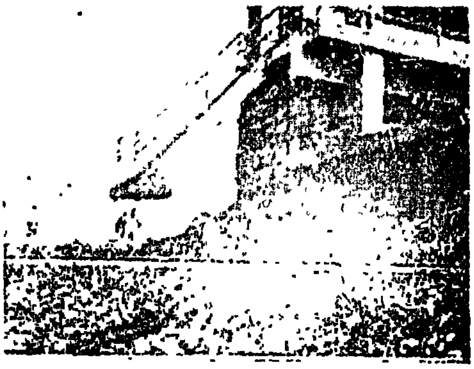
So taking into consider·tion the Pilot Project in Baliuag, Leyte and Iloilo, three crop seasons (one and half year) are not enough to build up the foundation of eductional purpose.

Developing a good Extension Worker and improving the performance of the job both in teaching and knowing rural people alone need at least one year.

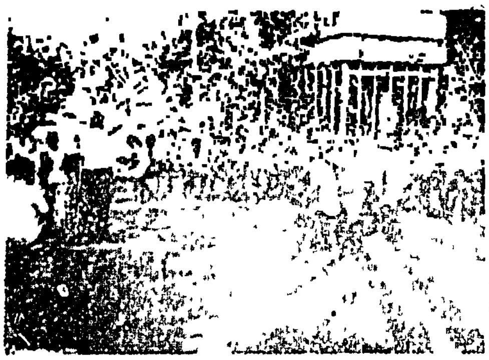
So the proposal for an extension of the Pilot project is neccesay.

ETCETERA....

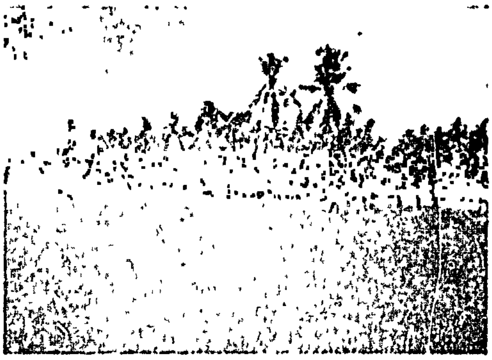
Typhoon damage to rice crop ....



........To irrigation system



Farmers' classes........



.... and Guided Tours for farmers outside Project Area

Vegetable production in support of the First Lady's, Mrs. Imelda R. Marcos, Home Garden Program

BINAHAAN TI[illegible]K RICE RESEARCH? DEMONSTRATI[illegible] AND PRODUCTION PROJECT

Table 1

ORGANIZATION CHART

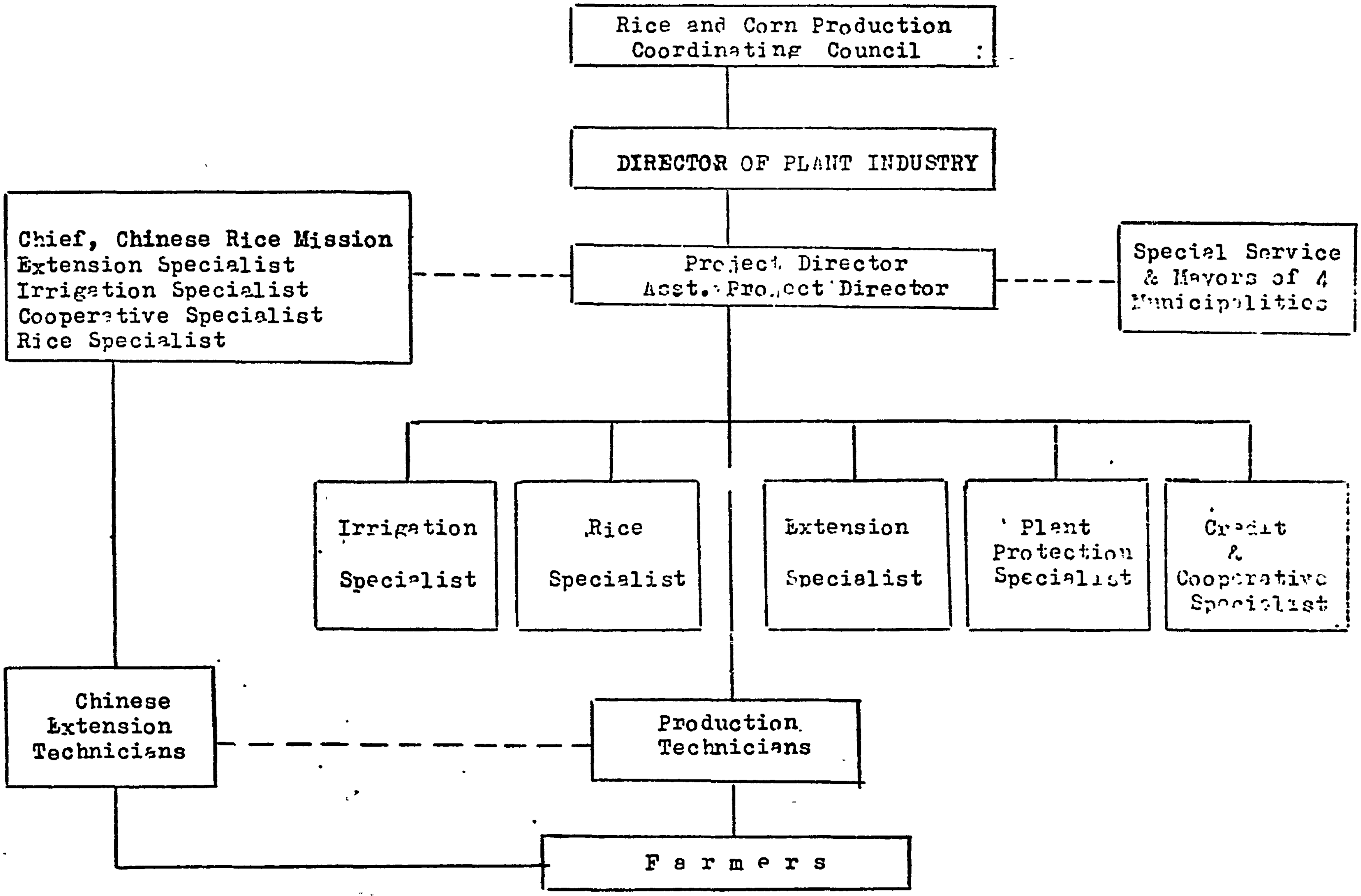

Rice and Corn Production Coordinating Council
DIRECTOR OF PLANT INDUSTRY
Chief, Chinese Rice Mission
Extension Specialist
Irrigation Specialist
Cooperative Specialist
Rice Specialist
Project Director
Asst. Project Director
Special Service & Mayors of 4 Municipalities
Irrigation Specialist
Rice Specialist
Extension Specialist
Plant Protection Specialist
Credit & Cooperative Specialist
Chinese Extension Technicians
Production Technicians
Farmers

Table 2

PERSONNEL OF THE BINAHAAN-TIBAK RICE RESEARCH DEMONSTRATION AND PRODUCTION PROJECT, PALO, LEYTE

STAFF

FILIPINO COUNTERPARTS	CHINESE COUNTERPARTS 1st & 2nd Season	 3rd Season
Emiliano P. Gianzon Project Director	Yuan-Ping Hung Chief, Chinese Mission	Hai-Tu Tsai* Chief, Chinese Mission
Celestino P. Tampil Asst. Project Director		
Baldrich T. Ocañada Extension Specialist	Pu-Sheng Yeh Extension Specialist	Yu-Feng Tang Extension Specialist
Feliciano C. Poliquit Agronomist	Chin-Seng Hsu Rice Specialist	Chen-Neng Wu* Rice Specialist
Sotero M. Sorilla Plant Protection Specialist		
Engr. Narciso Capala Irrigation Specialist	Chun-Tse Cheng Irrigation Specialist	Teng-Tsun Chou* Irrigation Specialist
Conrado A. Clarin Credit & Coop. Specialist	Pang-Tsou Liu Credit & Coop. Specialist	Chen Huang* Credit & Coop. Specialist

PRODUCTION TECHNICIANS

FILIPINO COUNTERPARTS	1st & 2nd Season	3rd Season
Rufino B. Herrera	Yen-Fong Hong	Jong-Su Chang
Salvador B. Salanio, Jr.	Tsai-Chvuan Chang	
Priscillano M. Seno	Shih-Chung Chen	
Rodolfo C. Alkuino	Bin-Nan Huang	Shih-Chung Chen
Dominador Carlobos	Sun-Chien Yang	
Generoso P. Colasito	Bing-Mian Shih	
Benito Corpin, Jr.	Jiunn-Chang Yu	Sheng-Yi Chen
Victoriano A. Herrera	Hsin Hsu	
Leonardo B. Hoyla	Wei-Pi Chen	
Edilberto Montalban	Chin-Hueng Huang	Ching-Sheng Chen
Velijado M. Nombre	Luan-Da Tsai	
Luis K. Pundavela	Cheng-Wang Chen	
Raymundo Tabudlong, Jr.	Chen-Shiung Lien	Shiow-Shong Lin
Jesus Baranda		

SUPPORTING STAFF

Mayor Antonio M. Ogayan - Palo, Leyte
Mayor Iluminado Martinez - Sta. Fe
Vice Mayor Constancio Cabañas - Sta. Fe
Mayor Conrado Enoveso - Pastrana, Leyte
Mayor Andres C. Yu - Alangalang

CLERICAL AND UTILITY STAFF

Pedro H. Velarde - - - Spl. Disbursing Officer
Rey B. Marmita - - - Production Technician
Segundina Cesar - - - Accounting Clerk
Eutropia R. Nirza - - - Adm. Clerk
Yolanda P. Molino - - - Clerk Typist
Roberto C. Roa - - - Illustrator
Edilberto Fullido - - - Office Helper
Miguel O. Casmio - - - Driver Mechanic
Pablo Songalia - - - Driver Mechanic
Francisco Catindoy - - - Janitor Guard

---

* Stationed in Pototan, Iloilo

Table 3

HARVEST REPORT

Variety	Pre-Project		PROJECT									
	Dry (1967)		Wet (1968)		Dry (1968)				Wet (1969) *			
					Before Typhoon		After Typhoon		Actually Harvested		Not Yet Harvested	
	Area (Ha.)	Ave.Prod (Cav/Ha)	Area (Ha.)	Ave.Prod (Cav/Ha)	Area (Ha.)	Ave.Prod (Cav/Ha)	Area (Ha.)	Ave.Prod (Cav/Ha)	Area (Ha.)	Ave. Prod. (Cav/Ha.)	Area (Ha.)	Est.Ave.Prod (Cav./Ha.)
IR 8	13.0	67.07	677.0	90.0	294.9	73.91	1390.79	55.02	1,308.35	75.53	346.2	65.05
IR 8 (68)	-	-	15.6	112.6	3.5	106.85	28.05	54.85	31.75	79.1	3.25	109.46
IR 5	-	-	1.8	100.0	7.8	78.58	87.40	50.67	164.55	67.92	90.35	93.87
IR 532	-	-	-	-	-	-	-	-	1.4	96.42	1.5	78
C 18	-	-	2.08	95.0	.3	83.33	-	-	2.0	59.5	0.8	34
C 4-63	-	-	.5	110.0	3.4	60.0	19.35	52.84	51.15	70.91	1.6	67.5
BPI 76-1	446.25	36.0	447.9	41.7	18.9	43.44	72.05	34.96	23.3	38.27	1.3	31.53
Seedboard	1253.2	27.06	897.4	40.7	44.85	61.75	286.20	28.03	215.29	48.12	77.1	46.54
Local	828.8	23.11	691.62	33.1	25.7	38.26	102.91	36.47	79.97	42.54	2.5	26.4
TOTAL	2541.25	27.55	2,734.00	51.6	399.35	68.93	1986.75	49.23	1,877.76	69.79	524.6	67.3
					52.53 Gen Ave.				69.24 Gen Ave.			

* 148 hectares was abondoned by farmers due to lack of water when the lateral was destroyed.

AVERAGE GROSS INCOME PER FARM OPERATOR

PRE-PROJECT

Variety and Cropping Season	Area Planted (Has.)	Production (Cavans)	Average Production (Cav/Ha.)	Value of Farm Product	Gross Income Per Farm Operator
January - May *					
Seedboard, Local, etc. (Irrigated)	1,353	40,590	30	₱ 649,440.00	(One season) ₱ 835.53
Seedboard, Local, etc. (Non-Irrigated)	1,381	34,585.24	25.04	₱ 553,363.84	
June - December **					
Seedboard, Local, etc. (Irrigated)	1,353	40,590	30	₱ 649,440.00	(One season) ₱ 895.73
January - May					
Seedboard, Local, etc. (Irrigated)	1,353	40,590	30	₱ 649,440.00	(one season) ₱ 835.53
Seedboard, Local, etc. (Non-Irrigated)	1,381	34,585.24	25.04	₱ 553,363.84	

* Non-irrigated areas are planted and harvested during the January-May Cropping Season, although several hectares are planted even as early as November and December.

** There is no record of area planted in non-irrigated this season since planting in non-irrigated areas is done only once a year. It is already indicated during the January-May planting. It is also assumed that only 730 farm operators used to plant during this season.

POST - PROJECT

October 1967 - May 1968					
IR 8	677.00	60,930.0	90	₱ 974,880.00	(For first season)
BPI 76-1	447.90	18,700.96	41.7	299,215.30	
Seedboard	897.40	36,587.86	40.7	585,405.76	
IR 8 (68)	15.70	1,769.64	112.6	28,314.24	
IR 5	1.80	180.00	100.0	2,880,00	₱ 1,551.99
C 18	2.08	197.60	95.0	3,161.60	
C 4	.50	55.00	110.0	880.00	
Local	691.62	22,906.22	33.1	366,499.52	
TOTAL	2,734.00	141,327.28	51.6	₱2,261,236.48	
No. of Farm Operators - 1,457					
June 1968 - December 1968					
IR 8	1,685.69	98,269.33	58.29	₱1,572,309.28	(For the 2nd season)
IR 8 (68)	31.55	1,912.45	60.61	30,599.20	
IR 5	95.20	5,041.56	52.95	80,664.96	
C 18	.3	25.0	83.33	400.00	₱ 1,406.61
C 4 (63)	22.75	1,226.55	53.91	19,624.80	
BPI 76-1	90.95	3,340.08	36.72	53,441.28	
Seedboard	331.05	10,792.24	32.60	172,675.84	
Local	123.61	4,737.0	36.83	75,793.28	
TOTAL	2,386.10	125,344.29	52.53	₱2,000,508.64	
No. of Farm Operators - 1,422					
January - June 1969.					
IR 8	1,654.55	121,351.51	71.98	₱1,941,624.16	(For the 3rd season)
IR 8 (68)	35.00	2,867.20	81.92	45,875.20	
IR 5	254.90	19,658.13	77.12	314,530.08	
IR 532	2.90	252.00	86.89	4,032.00	
C 18	2.80	146.20	52.21	2,339.20	₱ 1,798.50
C 4 (63)	52.75	3,735.55	70.81	59,768.80	
BPI 76-1	24.60	932.84	37.92	14,925.44	
Seed board	292.39	13,950.26	47.71	223,204.16	
Local	82.47	3,467.95	42.05	55,487.20	
TOTAL	2,402.36	166,361.64	69.24	₱2,661,786.24	

No. of Farm Operators - 1,480

January - May Cropping Season

Production increase over pre-project - - - - - - 66,152.04 cavans

Value of increase - - - - - - ₱1,058,432.64

Actual expenditure - - - - - - ₱179,682.75

Benefit Cost Ratio - - - - - - 1:5.89

June - December Cropping Season

Production increase over pre-project - - - - - - 84,754.29 cavans

Value of increase - - - - - - ₱1,356,068.64

Actual expenditure - - - - - - ₱217,317.60

Benefit Cost Ratio - - - - - - 1:6.24

January - May Cropping Season

Production increase over pre-project - - - - - - 91,186.40 cavans

Value of increase - - - - - - ₱1,458,982.40

Actual expenditure - - - - - - ₱100,713.37

Benefit Cost Ratio - - - - - - 1:14.40

SUMMARY

Gross income per season per farm operator (Pre-Project) - - - ₱ 849.52

Gross income per season per farm operator (Post-Project) - - - ₱1,588.33

Increase of gross income per season over that of Pre-Project - - - ₱ 738.81

Production increase over pre-project (three seasons) - - - 242,092.75 cavans

Value of increase - - - ₱3,873,483.68

Actual expenditure (three seasons) - - - ₱ 497,713.72

Benefit Cost Ratio - - - 1:7.78

Table 5

RICE PRODUCTION CONTEST WINNERS

Farmer Contestant	Location	Rank	Production in Cavans (Clean and Dry)
	OCTOBER 1967 - MAY 1968		
1. Simeon Dapuran	San Juan, Sta. Fe	First	230.25
2. Prescila Regis	Anahaway, Palo	Second	193.07
3. Lazaro Campo	Cangumbang, Palo	Third	187.10
4. Melquiades Castillano	Cangumbang, Palo	Fourth	185.93
5. Ampelo Villacorte	Biasong, Sta. Fe	Fifth	177.17
	JUNE 1968 - DECEMBER 1968		
1. Jacinto Mita	Lingayon, Alang^2	First	185.84
2. Antonio Flores	San Juan, Sta. Fe	Second	171.74
3. Venancio Superada	Modboron, Alang^2	Third	169.61
4. Juan Pedrosa	Cangumbang, Palo	Fourth	160.62
5. Francisco Guyjoco	Dapdap, Alangalang	Fifth	160.35
	JANUARY 1969 - JUNE 1969		
1. Diosdado Barcala	Victoria, Sta. Fe	First	235.24
2. Placido Bautista	Curba, Sta. Fe	Second	211.46
3. Julio Pontilla	Kotay	Third	171.07
4. Casimiro Fajardo	Tibak, Sta. Fe	Fourth	156.84
5. Cipriano Militante	Badiangay, Sta. Fe	Fifth	154.31

Table 6

Farmers Who Average 150 Cavans Per Hectare and Up

-oOo-

Farmers	Location	Production per Hectare		
		First Season Cav.	Second Season Cav.	Third Season Cav.
1. Ireneo Royo	San Pedro, Alang[2]	172	Not Planted	160
2. Jose Caedic	Dapdap, Alang[2]	159	30	50
3. Felix Alimangohan	Salvacion, Alang[2]	162	90	120
4. Martin Agamon	Lingayon, Alang[2]	163.35*	Not Planted	55
5. Prudencio Agamon	Salvacion, Alang[2]	160	Not Farming	Not Farming
6. Pablo Gargantilla	Mala Ehaw, Alang[2]	160	120	60
7. Alejandro Aguado	Canhidoc, Palo	156.8	137.5	125
8. Miguel Onida	Cangumbang, Palo	156.6	132.8	72
9. Lazaro Campo	Cangumbang, Palo	187.1*	137	70
10. Juan Pedrosa	Cangumbang, Palo	-	160.62	98
11. Melquiades Castillano	Cangumbang, Palo	185.93*	86	118
12. Diosdado Barcala	Bo. Victoria, Sta. Fe	174.3*	189*	235*
13. Julio Pontilla	Bo. Victoria, Sta. Fe	115	102	171*
14. Aurora Espiritu	Sto. Bulod, Sta. Fe	116	96	158
15. Iluminado Pedrero	Bo. Victoria, Sta. Fe	172.87*	69.36	89.5
16. Bernardo Carba	Bo. Katipunan, "	-	160	120
17. Victorino Malbas	Bo. Katipunan, "	70	130	150
18. Andres Castil	Bo. Katipunan, "	-	-	150
19. Prescila P. Estudillo	Anahaway, Palo	193.07*	121	82
20. Fortunato Dacillo	" "	40	114.5	152
21. Agapito Petilla	San Juan, Sta. Fe	92	108	150
22. Federico Estopin	San Juan "	72	127	167

Farmers	Location	Production per Hectare		
		First Season Cav.	Second Season Cav.	Third Season Cav.
23. Gregorio Doldolia	Bo. Aslum	53	100	151
24. Ulpiano Chuca	San Juan, Sta. Fe	60	73	146
25. Doroteo Bidua	Lingayon, Alang[2]	152.74	78	118
26. Jacinto Mita	Bobonon, Alang[2]	147*	185.89*	100
27. Placido Bautista	Curba, Sta. Fe	175.14	40	211*
28. Iluminado Martinez	Poblacion, Sta. Fe	156.67	63	150
29. Juanito Trigo	" "	150	43.2	150
30. Leonardo Cotejar	Curba, Sta. Fe	118	138.5	153.5
31. Begeda Roca	San Isidro, "	90	64	150
32. Hospicio Maceda	Badiangay, Sta. Fe	120	150	116
33. Cipriano Militante	" "	45	129.3	154
34. Jorge B. Tiu	Dapdap, Alang[2]	160	80	164
35. Casimero Fajardo	Tibak, Sta. Fe	113	60	156*
36. Antonio Alcala	Milagrosa, Sta. Fe	161.8	100	160
37. Telesforo Escober	Pastrana, Leyte	159.35	145	77
38. Domingo Villablanca	" "	153.15	115	94.5
39. Francisco Caidic	Maslog, Sta. Fe	150	135	55
40. Vicentico Caidic	Maslog, Sta. Fe	150	105	45
41. Panfilo Caidic	" "	150	142	45
42. Faustino Cabion	Tibak Sta. Fe	164	60	98
43. Francisco Esmero	Milagrosa, Sta. Fe	164	75	82
44. Eugenio Navarrete	Modboron, Alang[2]	160	-	167

Farmers	Location	Production per Hectare		
		First Season Cav	Second Season Cav.	Third Season Cav.
45. Inocencio Cruz	San Juan, Sta. Fe	150	-	..
46. Cayetano Galdo	Dapdap, Alangalang	150	90	150
47. Froilan Memoracion	Libertad, Palo	152	35	90
48. Pedro Pacheco	Milagrosa, Sta. Fe	180	120	160
49. Rosel Gorgonio	Tibak, Sta. Fe	180	150	140
50. Simeon Dapuran	San Juan, Sta. Fe	225*	140	160
51. Gonzalo Almenario	Pastrana, Leyte	115.5	126	155
52. Venancio Superado	Mudboron, Alangalang	125	160*	30
53. Ampolo Villacorte	Biasong, Sta. Fe	177	133	70
54. Francisco Guyjoco	Dapdap, Alangalang	-	160*	125
55. Antonio Flores	San Juan, Sta. Fe	94	171*	180
56. Pedro Petilla	" "	130	114	169

Legend:

* Contestant - Farmers did not continue